

I CLAIM:

1. A tire rim temperature sensor comprising:
 - a wheel weight format housing having a rim temperature sensor therein;
 - a clip on the housing suited for mounting on a wheel rim; and
 - the sensor including a transmitter to send a temperature signal remotely.
2. The sensor of claim 1 further comprising a battery.
3. The sensor of claim 2, wherein the battery can be replaced without a removal of a tire affixed to the rim.
4. The sensor of claim 3 further comprising a signal conditioning unit, a processor unit, a memory and an antenna.
5. The sensor of claim 4 further comprising a receiver.
6. The sensor of claim 4, wherein the memory further comprises a unit identifying code.
7. A tire rim temperature sensor comprising:
 - a housing mountable to a surface of a tire rim;
 - a rim temperature sensor incorporated into the housing; and
 - a transmitter to send a temperature signal remotely.
8. The sensor of claim 7 further comprising a weld attachment to a rim.

- 1 9. The sensor of claim 7 further comprising a bond
2 attachment to a rim.
- 3 10. The sensor of claim 7 further comprising an attachment
4 to an inside a tire surface of the rim.
- 5 11. The sensor of claim 10 further comprising an air
6 temperature sensor.
- 7 12. The sensor of claim 10 further comprising a tire air
8 pressure sensor.
- 9 13. A tire rim temperature sensor comprising:
10 a housing suited to fit into a hole in a tire rim;
11 a rim temperature sensor associated with the
12 housing; and
13 a transmitter associated with the housing.
- 14 14. The sensor of claim 13 further comprising an air
15 temperature sensor.
- 16 15. The sensor of claim 13 further comprising a tire air
17 pressure sensor.
- 18 16. A method to detect a high temperature tire condition,
19 the method comprising the steps of:
20 affixing a rim temperature sensor to a tire rim;
21 receiving a temperature signal form the sensor; and
22 processing the rim temperature signal to determine
23 an alarm condition.
- 24 17. The method of claim 16 further comprising the steps of:

1 receiving a plurality of temperature signals from a
2 plurality of tire rims, each tire rim having a
3 rim temperature sensor; and
4 comparing the relative tire rim temperatures to
5 determine an alarm condition.

6 18. The method of claim 16 further comprising the step of
7 comparing the temperature signal to a stored constant
8 to determine the alarm condition.

9 19. The method of claim 16 further comprising the step of
10 comparing the temperature signal to a historic log to
11 determine the alarm condition.

12 20. A tire safety alarm system comprising:
13 a rim temperature sensor on each tire rim of a
14 vehicle;
15 said rim temperature sensors having a transmitter
16 to send a temperature signal to an on board
17 computer;
18 said on board computer having alarm logic including
19 a comparative tire rim temperature algorithm;
20 and

1 wherein any tire rim that overheats triggers an

2 alarm.

3